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PRESS RELEASE

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**DANISH DATABASE SHOULD PREVENT RESEARCH WASTE
AND SAVE BILLIONS OF DOLLARS**

Every year, thousands of biomedical research projects are discarded because the scientists have the wrong antibodies in the laboratory. A research group is leading an initiative that should help scientists navigate a complicated market.

It costs the scientists - and therefore society - between one and 1.8 billion dollars in wasted working hours, misleading conclusions and missing results, because they have invested in the wrong antibodies for their experiments. Unreliable antibodies often mean that the development of new drugs is delayed or may even come to a complete stop because the scientists are not able to repeat crucial experiments.

Three hundred producers worldwide sell more than 15 million different antibodies made from animals, but many of the antibodies do not live up to what the data sheets promise and the scientists are groping in the dark when they are buying them.

The statement comes from **Simon Glerup**, associate professor in neurobiology at the department of biomedicine at Aarhus University. With bitter experience of non-specific antibodies, he is now the head of a research group that will provide a better overview and transparency.

"In 50-90 percent of cases scientists have to discard a new antibody and start all over again after having spent thousands of krone and several days testing it. Thus, each year the treasury, the industry and the charitable funds pour billions of krone down the drain," he said.

Professor Glerup and his team are creating a database which - with crowd sourcing - allows scientists to get a quick overview of good and bad antibodies. Hundreds of scientists have already submitted user-experiences to the database and have exchanged data. This means that the right antibodies are used from the beginning.

Professor Glerup today (4 July) presented his database called pAbmAbs.com at FENS Forum, the largest Neuroscience meeting in Europe, which takes place in Copenhagen.

Antibodies are proteins that are used to identify, isolate and visualise other molecules.

An antibody can recognise a specific protein among thousands of other proteins in the body's tissues and organs, and is therefore an indispensable tool in scientific research, especially in neuroscience. But antibodies can also have potentially devastating effects on research results. "The variations in antibodies may result in dramatically different results," he said.

The research community has received the database with great enthusiasm and the scientific journal, *Nature*, proclaimed the database to be an 'evangelist for scientific reproducibility'. Numerous producers of antibodies are, however, less enthusiastic about the new tool.

"Antibodies cost a staggering two billion dollars a year worldwide. The database is forcing manufactures to provide better quality and more detailed information, while the research community can save a fortune and spend their time making scientific progress rather than testing useless antibodies," Professor Glerup explained.

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Poster: The pAbmAbs project – the collecting and sharing of antibody performance data through crowd-sourcing

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NOTES TO EDITORS

The 10th FENS Forum of Neuroscience, the largest basic neuroscience meeting in Europe, organised by FENS and hosted by the Danish Society for Neuroscience will attract an estimated 6000 international delegates. FENS mission is to advance research and education in neuroscience within and outside Europe, to facilitate interaction and coordination between its members. FENS represents 43 national and single discipline neuroscience societies with about 24,000 member scientists from 33 European countries. <http://www.fens.org/>

Further Reading

Rating antibodies, *Lab Times*, March 2014

http://www.labtimes.org/labtimes/trick/tricks/2014_03.lasso

Youtube video : 1st International Antibody Validity Forum

<https://www.youtube.com/watch?v=Etsv6YcWk5Q>

Reproducibility crisis: Blame it on the antibodies, *Nature*, May 2015

<http://www.nature.com/news/reproducibility-crisis-blame-it-on-the-antibodies-1.17586>

pAbmAbs project

<http://www.pabmabs.com>